

What is claimed is:

1. A method of forming microstructures on a substrate, the method comprising:
disposing a curable material on a substrate, wherein the curable material comprises a
viscosity of less than 12,000 cps;

5 contacting the curable material with a flexible mold starting at a first end of the
substrate and proceeding at a substantially uniform contact speed in a first direction and
applying a substantially uniform contact pressure;

 forming the curable material, using the mold, into a lattice pattern, wherein the lattice
pattern comprises a first set of ribs aligned in the first direction and a second set of ribs
10 aligned in a second direction substantially orthogonal to the first direction, wherein the first
set of ribs comprises a pitch of less than 500 μm ;

 curing the curable material; and
 removing the mold.

15 2. The method of claim 1, further comprising firing the curable material after removing
the mold.

3. The method of claim 2, wherein the fired curable material is substantially devoid of
defects.

20 4. The method of claim 1, wherein the pitch of the first set of ribs is less than 300 μm .

5. The method of claim 1, wherein the ratio of the average width of each rib of the
second set of ribs and the average width of each rib of the first set of ribs is at least 1.5.

25 6. The method of claim 1, wherein a plurality of ribs of the first set of ribs are connected
by intervening land regions, and further wherein the intervening land regions comprise a
substantially uniform center thickness.

7. The method of claim 1, wherein a plurality of ribs of the second set of ribs are connected by intervening land regions, and further wherein the intervening land regions comprise a substantially uniform center thickness.
- 5 8. The method of claim 1, wherein the curable material comprises a ceramic material.
9. The method of claim 1, wherein contacting the curable material comprises unrolling the flexible mold while contacting the curable material starting at the first end of the substrate.
- 10 10. The method of claim 9; wherein removing the flexible mold comprises rolling the flexible mold onto a receiving element.
11. A microstructured assembly, comprising:
a substrate;
15 a flexible mold comprising a microstructured surface that opposes a surface of the substrate;
a curable material disposed between the substrate and the microstructured surface of the flexible mold, wherein the microstructured surface of the mold is configured to impart a lattice pattern into the curable material, wherein the lattice pattern comprises a first set of ribs
20 aligned in a first direction and a second set of ribs aligned in a second direction substantially orthogonal to the first direction, wherein the first set of ribs comprises a pitch of less than 500 μm , wherein the curable material comprises a viscosity of less than 12,000 cps, and further wherein the curable material is substantially devoid of large bubbles.
- 25 12. The assembly of claim 11, wherein the pitch of the first set of ribs is less than 300 μm .
13. The assembly of claim 11, wherein the ratio of the average width of each rib of the second set of ribs and the average width of each rib of the first set of ribs is at least 1.5.

14. The assembly of claim 11, wherein a plurality of the first set of ribs are connected by intervening land regions, and further wherein the intervening land regions comprise a substantially uniform center thickness.

5 15. The assembly of claim 11, wherein a plurality of the second set of ribs are connected by intervening land regions, and further wherein the intervening land regions comprise a substantially uniform center thickness.